EXHIBIT E

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GOOGLE LLC

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN FRANCISCO

ANIBAL RODRIGUEZ, JULIEANNA MUNIZ, ELIZA CAMBAY, SAL CALTADO, EMIR GOENAGA, JULIAN SANTIAGO, HAROLD NYANJOM, KELLIE NYANJOM, and SUSAN LYNN HARVEY individually and on behalf of all other similarly situated, Plaintiffs vs GOOGLE LLC, Defendant.	Case No. 3:20-CV-04688 **DECLARATION OF NEVIN KAPUR IN SUPPORT OF GOOGLE LLC'S OPPOSITION TO PLAINTIFFS' REQUEST FOR A SEARCH OF LOGS AND DASHBOARD DATA** Judge: Hon. Alex G. Tse Courtroom: A, 15th Floor Action Filed: July 14, 2020 Trial Date: Not Set

1   I, Nevin Kapur, declare as follows:

2   1.   I am a Senior Technical Advisor and have been at Google Inc. since 2012. I

3   make this declaration based on my personal knowledge of source code matters at Google

4   and, if called as a witness, could and would competently testify to the facts contained herein.

5   2.   As a Senior Technical Advisor, my role is to manage a team of Technical

6   Advisors who assist the Google Legal team with technical issues that arise in litigation and

7   related matters. As part of my responsibilities I manage the identification and collection of

8   source code for litigation-related matters. I understand that Google is involved in the above-

9   captioned litigation brought by private Plaintiffs. Specifically, I understand that Plaintiffs

10   have requested that Google engage in a search that would require a search of logs and source

11   code to: "Identify and describe every Google dashboard, bit, field, or tracking tool that, at

12   any point during the class period, (1) contained information related to the WAA status of any

13   Google account, including aggregated statistics, or (2) tracked whether specific data was

14   generated while WAA / sWAA was switched off." I am further aware that Plaintiffs also

15   request that Google: "Identify every data source or log that at any point during the class

16   period contained WAA-off data or sWAA-off data, including a list of all field names and

17   descriptions."

18   3.   Typically requests for source code identify particular functionality at a specific

19   point in time for which the source code is needed. Here, by contrast, Plaintiffs' request is

20   exceedingly broad and vague. Google's code base contains more than 4 billion lines of code

21   and differs by product. What appears to be one functionality externally is typically

22   developed by a large number of internal teams, each of which develops their piece of the

23   functionality independently of each other. Finding source code at Google requires working

24   with individual engineers who work on the functionality of interest to conduct iterative

25   searches.

26   4.   Plaintiffs' request appears to require a search of Google's source code for how

27   information related to WAA-status may be used anywhere within Google's codebase and any

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1   data that was generated while WAA / sWAA was switched off. An initial search yielded

2   more than 10,000 hits for symbols that contained the string "waa," "swaa," "smh," or

3   "gaiauserstate." Plaintiff's demand appears to require manually going through these search

4   results to determine whether any of them lead to a Google dashboard, bit, field or tracking

5   tool that contains responsive information. To investigate each one would require at a

6   minimum a discussion or correspondence exchange with the engineer responsible for the

7   code. I would estimate the time burden more accurately, but even identifying which engineer

8   is responsible for each portion of code containing a hit is a manual process, which could

9   take days to weeks of time by itself. In my ten years of experience, such a task is

10   unprecedented at Google in response to any litigation request. I am not aware of any tool

11   available to Google designed to answer a question of this magnitude.

12   5.   To then search for how and whether each of the pieces of code has changed

13   over the last several years would be exponentially more difficult. In the last five years, there

14   have been at least 100 million changes to Google's codebase. I have never been asked to

15   engage in a technical investigation (including source code review) of this magnitude. While

16   it is extremely difficult to fathom how to execute such a task, it could potentially call for

17   review of hundreds of thousands of lines of code.

18   6.   As an illustrative example, I searched for all changes within the last five years

19   that contain the string "waa," which yielded more than 40,000 results. I am not aware of any

20   method other than individual manual review of each of these changes to determine whether

21   they are responsive to Plaintiff's requests. Furthermore there is no guarantee that a string

22   search such as this would capture every possible change related to logging/use of "WAA

23   status."

24   7.   None of the above addresses the second half of Plaintiffs' request: to describe

25   all logs the fields appear in, and all other fields in those logs. To do that would dramatically

26   increase the burden of this task. Google's logs repositories contain tens of thousands of logs,

27   and some logs can contain thousands of fields. In one logs repository alone, (S*****l, an

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1   internal Google system that allows for the collection, storage, and management of event

2   records), based on a rudimentary first-cut search, logs that contain any field with the terms

3   "waa," "smh," or "gaiauserstate" (which may refer to waa status) in their name contain, in

4   total, over 1 million unique fields. To explain what each field means (and whether it is even

5   in use) would require repeating the method described above for each of the fields,

6   exponentially increasing the magnitude of the work required to arrive at definitive or even

7   approximate answers. On the other hand, producing a list of over 1 million fields would be

8   meaningless, as field names are created by individual engineers and do not follow any format

9   or template that can be relied upon to derive their meaning.

10   I declare under penalty of perjury under the laws of the State of California that the

11   foregoing is true and correct. Executed on 11 October 2022, in _Mountain View, CA_ .

13   By: _Nevin Kapur_
                                                   Nevin Kapur

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